Claims 1-29 (cancelled previously)

30. (currently amended) A measuring apparatus for measuring genetic sequence of electrically charged biopolymers by hybridization, said apparatus comprising:

a container that contains [known and unknown] normally mobile biopolymer segments which are of known identities and of unknown identities and which are to be hybridized, said container being removable from said measuring apparatus; and

one or more electrodes disposed to be adjacent to said container for applying an electric field to said container, said one or more electrodes being electrically insulated from said container, and further being provided with protrusions formed at spatial positions corresponding to sites whereat gather a plurality of [types of] said biopolymer segments within said container when said electric field is applied.

31.(previously presented) The apparatus of claim 30, wherein conductive members are formed at spatial positions corresponding to said sites.

32.(previously presented) The apparatus of claim 30, wherein said biopolymer segments are DNA, RNA, PNA, or electrically charged proteins.

33.(previously presented) The apparatus of claim 30, wherein said container is made of a film, and said one or more electrodes are in mechanical contact with said container and are made of transparent film.

34. (previously presented) The apparatus of claim 33, wherein

said biopolymer segments are DNA, RNA, PNA or electrically charged proteins.

35. (previously presented) The apparatus of claim 30, wherein said container is made of a film.

36. (previously presented) The apparatus of claim 30, wherein said one or more electrodes are in mechanical contact with said container.

37. (previously presented) The apparatus of claim 30, wherein said one or more electrodes are transparent electrodes.

38. (previously presented) The apparatus of claim 37, wherein said one or more electrodes are made of ITO film.

39. (currently amended) A measuring apparatus for measuring genetic sequence of electrically charged biopolymers by hybridization, said apparatus comprising:

a container that contains [known and unknown] normally mobile biopolymer segments which are of known identities and of unknown identities and which are to be hybridized, said container being removable from said measuring apparatus;

one or more electrodes disposed to be adjacent to said container for applying an electrical field to said container, said one or more electrodes being electrically insulated from said container; and

means for altering direction of said electric field so that wrongly hybridized segment pairs are separated; wherein

said one or more electrodes are provided with protrusions formed at spatial positions corresponding to sites whereat gather

a plurality of said [types of] biopolymer [segment] segments within said container when said electric field is applied.

40. (previously presented) The apparatus of claim 39, wherein conductive members are formed at spatial positions corresponding to said sites.

41.(previously presented) The apparatus of claim 39, wherien said biopolymer segments are DNA, RNA, PNA or electrically charged proteins.

42.(previously presented) The apparatus of claim 39, wherein said container is made of a film, wherein conductive members are formed at spatial positions corresponding to said sites; and wherein said one or more electrodes are in mechanical contact with said container and are made of transparent film.

43. (previously presented) The apparatus of claim 42, wherein said biopolymer segments are DNA, RNA, PNA, or electrically charged protein.

44.(previously presented) The apparatus of claim 39, wherein said container is made of a film.

45. (previously presented) The apparatus of claim 39, wherein said one or more electrodes are in mechanical contact with said container.

46.(previously presented) The apparatus of claim 39, wherein said one or more electrodes are transparent electrodes.

47.(previously presented) The apparatus of claim 46, wherein said one or more electrodes are made of an ITO film.

48(currently amended) A measuring apparatus for measuring

genetic sequence of electrically charged biopolymers by hybridization, said apparatus comprising:

a hermetically sealed container that contains [known and unknown] normally mobile biopolymer segments which are of known identities and of unknown identities and which are to be hybridized, said container being removable replaceably from said measuring apparatus;

one or more electrodes disposed so that said container is readily movable into a position adjacent thereto, said one or more electrodes being insulated from said container;

means for applying an electrical signal to said one or more electrodes to cause said known biopolymer segments to be immobilized at particular sites within said container, and to cause said mobile unknown biopolymer segments [segment] to approach said immobilized known biopolymer segments [segment] so as to increase speed of hybridization; and

means for applying a reverse electrical signal to said one or more electrodes to separate wrongly hybridized biopolymer segment pairs.

49. (new) The apparatus of claim 48, further comprising means for optically viewing hybridized biopolymer segments.